

Telecommunication - Smart Contact Lens

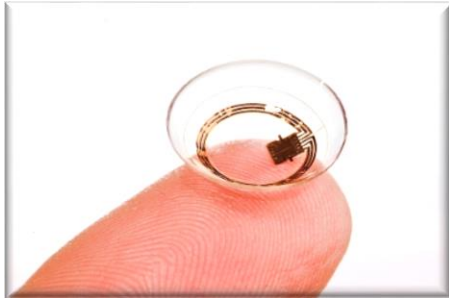
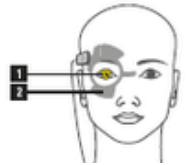
GEN TRIZ Case Study

Case Study: Smart Contact Lens

- GEN TRIZ identified several opportunities for improved contact lens performance through new functionality
- The deployment of various nano-sensors into the lens would enable multiple IoT solutions, including diagnosis of various medical conditions – some of which extend beyond vision improvement
- *Note: today Sensimed product (Triggerfish) is using very bulky technical solution, including wired antenna (2) around eye with contact lens (1) for power supply and data exchange***

** <http://www.electronicweekly.com/news/research-news/device-rd/in-pictures-a-smart-contact-lens-monitors-the-eye-2010-03/>

*** <http://www.sensimed.ch/en/sensimed-triggerfish/sensimed-triggerfish.html>



Sensimed Prototypes



STMicroelectronics is working with Swiss company Sensimed to develop a contact lens with nano-sensors fabricated in silicon-based MEMS technology which can be used to measure the shape of the human eye and could be used in the early diagnosis of conditions such as glaucoma.*

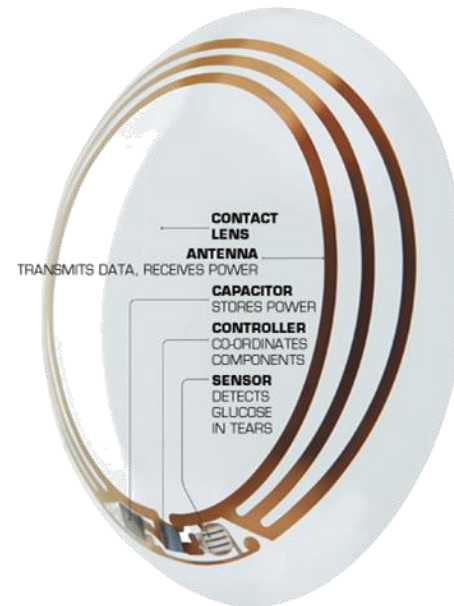
The lens incorporates a MEMS device which acts as a strain gauge, an antenna and a dedicated processing circuit and an RF transmitter to communicate the measurements to a receiver worn by the patient. The lens is powered via the radio link and so does not need to be connected to a battery.**

Case Study: Smart Contact Lens

IoT Technology. Wearable Devices. Smart Contact Lens. Idea Development

- The concept of a smart contact lens and technology led to a co-development initiative between Novartis and Google
- “Google and Novartis are working on two smart contact lenses, and news broke this week about both of them: A new patent application sheds light on how Google might power its **glucose-sensing contact lens**, just a week after partner Novartis told a Swiss newspaper it was on track for human trials in 2016 of an autofocus lens for presbyopia patients.”

MobiHealthNews, September 8, 2015



<http://mobihealthnews.com/46600/novartis-ceo-comments-new-patent-shed-light-on-googles-contact-lens-projects>